Claims

1. An arrangement for projecting a color video image onto a projection surface (121), which image is composed of image points, said arrangement comprising at least one light source (122), which emits a light bundle (113) and has a variable intensity; a deflection device (112), which deflects the light bundle (113) onto the projection surface, and two-stage transformation optics (109), which are arranged between the deflection device (112) and the projection surface (121) and consist of two partial systems having positive power of refraction, and wherein the entrance pupil (EP) is located in front of the first lens vertex (2) of the transformation optics (109), and the exit pupil (AP) of the transformation optics is located between the lens vertex of the last lens (14) of the transformation optics (109) and the projection surface (121), and a stop (111) is arranged in the exit pupil (AP).

2. The arrangement as claimed in claim 1, wherein the stop (111) has a clear diameter, which corresponds to the product of a correction factor of between 1 and 1.5 with the result of the division of a diameter of the incident light bundle, divided by an angular magnification of the transformation optics (109).

3. The arrangement as claimed in claim 1 or 2, wherein the stop (111) is part of a housing (120) of the transformation optics (109).

4. The arrangement as claimed in claim 1 or 2, wherein the stop (111) is integrated into the surface of a wall (103) and the transformation optics (109) are positioned relative to said wall (103).

5. The arrangement as claimed in claim 4, wherein the wall (103) is the projection surface (121).

6. The arrangement as claimed in any one of the above claims, wherein the transformation optics (109) are corrected for imaging free from distortion.

7. An optical system for transforming the angle of an incident light bundle (113), said system comprising two-stage transformation optics (109), which consist of two partial systems having positive power of refraction, which are arranged following each other, as seen in the direction of light propagation, wherein the ratio of the refractive powers of the partial systems determines the angular magnification of the deflected light bundle, and the arrangement of the lenses in the

second partial system is selected such that – as seen in the direction of light propagation – the exit pupil (AP) of the transformation optics (109) is located between the lens vertex of the last lens of the projection surface (109) and the projection surface (121), and wherein the stop (111) is arranged in the exit pupil (AP).

8. The arrangement as claimed in claim 7, wherein the transformation optics (109) are corrected for imaging free from distortion.

9. An optical system for transforming the angle of an incident light bundle, said system comprising two-stage angle transformation optics (115), whose exit pupil (AP_{WT}) is located within the lenses of the optical system, with relay optics (116), which consist of two partial systems having positive power of refraction, being arranged posterior to the angle transformation optics (115), as seen in the direction of light propagation, wherein the arrangement of the lenses in the second partial system is selected such that, as seen in the direction of light propagation, an exit pupil (AP_{Rel}) of the relay optics (116) is located between the lens vertex of the last lens of the relay optics (115) and the projection surface (121), and wherein a stop is arranged in the exit pupil (AP_{Rel}) of the relay optics (115).

10. The optical system as claimed in claim 9, wherein the two-stage angle transformation optics are corrected for imaging free from distortion.